

11-2-12

COMBINING LIKE TERMS

Sometimes an expression is made up of several #s and/or several variables.

You can combine #s and combine "like" variables (same letters) to "simplify" (shorten) the expression.

* When possible, use properties to help you (associative, commutative, distributive)

$$\begin{aligned}\text{Ex: } & 27 + 2x + 3 + 5x \\ & (2x + 5x) + (27 + 3) \\ & 7x + 30 \text{ DONE}\end{aligned}$$

commutative property
associative property

$$\begin{aligned}\text{Ex: } & 35 + 3y + 6 + 2x + 9y + 10x \\ & (2x + 10x) + (3y + 9y) + (35 + 6) \\ & 12x + 12y + 41\end{aligned}$$

SOLVING 2-STEP EQUATIONS

Sometimes an algebraic equation or inequality will involve more than one operation.

** Add or subtract the #s w/ the variable first to get rid of that #.
Then, multiply or divide to get rid of the # w/ the variable.

Ex: $2x + 22 = 30$
 $\quad \quad \quad - 22$
 $\quad \quad \quad \underline{\quad}$
 $\quad \quad \quad 0$

Subtract 22 1st

$$\frac{2x}{2} = \frac{8}{2}$$

$$x = 4$$

Ex: $5y + 6 \geq 41$

$$5y + 6 \geq 41$$
$$\quad \quad \quad - 6$$
$$\quad \quad \quad \underline{\quad}$$

$$\frac{5y}{5} \geq \frac{35}{5}$$

$$y \geq 7$$